

WHAT IS CLAIMED IS:

1. A heterogeneous device, comprising:
a substrate;
a high voltage well of a first circuit device defined in the substrate; and
a first low voltage device of a second circuit device defined in the substrate.
2. The device of claim 1, further comprising a photodiode defined in the substrate.
3. The device of claim 1, further comprising at least one microelectromechanical system-based element defined in the substrate.
4. The device of claim 1, wherein the substrate comprises a layer of silicon.
5. The device of claim 4, wherein the layer of silicon comprises p-type silicon.
6. The device of claim 1, wherein the substrate comprises a silicon-on-insulator wafer comprising a single-crystal-silicon layer, a substrate and an insulator layer therebetween.
7. The device of claim 6, wherein the single-crystal-silicon layer comprises p-type silicon.
8. The device of claim 1, further comprising a second low voltage well of the second circuit device defined in the substrate.
9. The device of claim 8, further comprising a field oxide layer over at least part of each of the high voltage well, the first low voltage well and the second low voltage well.
10. The device of claim 9, further comprising a polysilicon gate associated with each of the high voltage well, the first low voltage well and the second low voltage well.

11. The device of claim 10, further comprising:
 - a P-body defined in the high voltage well of the first circuit device;
 - an N+ source/drain defined in each of the P-body, the high voltage well and the first low voltage well of the second circuit device; and
 - a P+ source/drain in each of the P-body and the second low voltage well of the second circuit device.
12. The device of claim 11, further comprising:
 - a passivation oxide layer over at least the field oxide layer and the polysilicon gates;
 - a plurality of vias through the passivation oxide layer; and
 - a plurality of contacts, each of the contacts extending through the vias and contacting at least one of the sources/drains.
13. A heterogeneous device, comprising:
 - a substrate; and
 - a plurality of heterogeneous circuit devices defined in the substrate.
14. The device of claim 13, wherein the plurality of heterogeneous circuit devices comprises at least one complementary metal oxide semiconductor] transistor and at least one double-diffused metal oxide semiconductor] transistor.
15. The device of claim 13, further comprising a photodiode defined in the substrate.
16. The device of claim 13, further comprising at least one microelectromechanical system-based element defined in the substrate.
17. The device of claim 13, wherein the substrate comprises a layer of silicon.
18. The device of claim 17, wherein the layer of silicon comprises p-type silicon.
19. The device of claim 13, wherein the substrate comprises a silicon-on-insulator wafer comprising a single-crystal-silicon layer, a substrate and an insulator layer therebetween.

20. The device of claim 19, wherein the single-crystal-silicon layer comprises p-type silicon.